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ABSTRACT

Growing populations of older adults, ethnic minorities, and the low-literate create unique concerns for the design of visual information. Those for whom text presents a barrier will respond most to legibility, use of familiar formats and symbols, and simplification. Guidelines for those processes are needed, and this paper, in particular, identifies principles for designing and evaluating visual components of educational materials for ethnic populations in the United States. Educational print materials for ethnic populations on food safety were solicited from over 50 organizations. Guidelines that emerged from that study include, but are not limited to: (1) use pastels and very true-to-life skin tones when possible; (2) avoid using randomly decorative symbols; (3) be aware that symbols like the skull and crossbones, which Americans consider universally recognizable, sometimes fail to communicate to other cultures; (4) use appealing typestyles; (5) reflect cultural norms in the design, like including a wedding ring on the finger of a pregnant Hispanic woman; (7) be alert to cultural differences in gestures and facial expressions; (8) stick to everyday situations when attempting to depict lifestyles; (9) keep silhouettes to a minimum, since they may suggest concealment or evil; and (10) arrange the message in logical sequence and proportional scale. (Contains 17 figures and 49 references.) (BEW)

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Visually Translating Educational Materials for Ethnic Populations

ED 391 485

Carole B. Schiffman

Introduction

Population Trends

The composition of our population is changing. By 2010, the number of people over 55 will climb by 34 percent. More foreign-born people were reported entering the United States between 1985 and 1990 than in any previous five-year period since 1960 (U.S. Bureau of the Census, 1994, 1995), and results of a 1992 National Adult Literacy Survey indicated that 21 to 23 percent of adults in the U.S. demonstrate the lowest level of literacy (Kirsch, Jungblut, Jenkins, & Kolstad, 1993). Communication experts assert that this diversity, or fragmentation of the mass audience, signals the decline of mass media as a vehicle by which to reach audiences (Wilcox, Ault & Agee, 1992).

Print Materials and the Importance of Visuals

While encumbered by challenges, print materials continue to be a primary format for education materials. Unlike many new technologies, they can be easily tailored to the needs of special audiences (Zimmerman M., Newton, N., Frumin, L. & Wittet, S.)

In a society that is becoming increasingly visually oriented (Wilcox, et al., 1992) and diverse, few appreciate the critical role of visual literacy. A recognition of the need for effective and appropriate visuals in educational materials is necessary to the future success of public service education. Fragmented by the needs of a diverse population, funds no longer reach as far, and we cannot afford to waste resources on ineffective materials.

Special Needs

Each of the three growing special populations, senior, ethnic and low-literate, carries with it special needs regarding information design, and specifically, visuals. For seniors, failing sight makes issues of legibility critical, and a decreased ability to process and comprehend complex verbal information quickly can increase the importance of visual messages. For ethnic populations, differences in familiarity with and affinity for certain types of visuals can mean the difference between receptivity and irrelevance; comprehension and confusion. For verbally low-literate populations, text itself is likely to present a greater barrier than visuals, and reading difficulties make legibility important.

Educators and designers have increasingly attempted to target materials by educational level. Guidelines for the design of legible information are well documented (Paterson & Tinker, 1931; Felker, Pickering, Charrow, Holland & Redish, 1981), and recommendations for the simplification of text and visuals is widely available (Doak et al., 1985; Zimmerman, et al.,1989). However,

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information pertaining to design based on cultural differences of populations in the U.S. is not easily isolated from the literature.

As a result, verbal translations, as in the six brochures on the food label (see figures 1.1 through 1.6) stop short of visual translations. We have failed miserably at demographically describing and targeting our audience by visual literacy and sometimes to even recognize a difference. Yet visual messages, like verbal messages are not inherently self-explanatory (Fugelsang, 1973; Wileman, 1991) nor are they necessarily cross-culturally appropriate. What is needed in information design today are guidelines for designing or evaluating visuals for those who are culturally "differently visually literate" from the dominant population; not just a simplification of information.

Comprehension and Preference

A recognition as well as appreciation of visuals can be dependent on familiarity (Crone & Moos, 1991). Recognition of images does not guarantee comprehension (NDS, n.d.; Wileman, 1991) and comprehension does not guarantee preference.

Nely Galan, president of a new entertainment business targeted toward the Hispanic market, notes that Latinos are part of a distinctly different visual culture from other Americans (Garcia, 1994). Such differences must be taken into account for each audience. She claims that "[Latinos are] a status-oriented society, and to Latin Americans black-and-white equals flea market. In the U.S., you can launch a whole channel of black-and-white movies and call it American Movie Classics."

Purpose and Objectives

While information design guidance for low-literate populations usually addresses issues of cultural sensitivity to a limited extent, the emphasis is largely on simplification rather than adaptation. On the other end of the spectrum, designers of visual materials in developing countries may be attentive to cultural differences (Moynihan & Mukherjee, 1981; Rana, 1990; Zimmer & Zimmer, 1978; Zimmerman, et al., 1989), but guidance is generally meant for working with pictorially low- or even il-literate populations. They fail to directly address the needs of the ethnic people in a new culture.

This paper identifies guidelines for designing and evaluating visual components of educational materials for ethnic populations in the U.S. Relevant principles from related research with verbally low-literate populations in developed countries and visual literacy in developing countries will be used as a basis for the guidelines.

Food safety, nutrition and related health materials have been cited as examples within the text, as the nature of my work at the U.S. Food and Drug Administration (FDA) offers me good access to them.

To supplement this review, results from focus group tests on materials developed for an ethnic population in the U.S. are cited.

Figures 1.1–1.6

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Concurrent with a growing need for culturally relevant materials in the U.S., developing countries have increasingly requested assistance from the U.S. in food safety education as they institute food control systems. In response, a review of food safety educational materials for ethnic populations in the U.S. and for consumers in developing countries was conducted to see if such materials could be adapted and shared to meet the needs both, of refugees in the U.S. and consumers in developing countries.

It should not be implied from this paper that every project need address every visual translation guideline, but that designers should be aware of visual blunders, and following some guidelines may facilitate communication cross cultural bounds. They may be seen as "red flags", or reminders, for editing purposes. Certain guidelines will be more important at certain times. Rana (1990) claims that a guide with broad generalizations, or instructions for adaptations of visuals to incorporate local variations and educational levels, can be developed and used to save project time, resources and money. I hope to provide a kernel of what could be used as such a guide.

Research

Literature Review

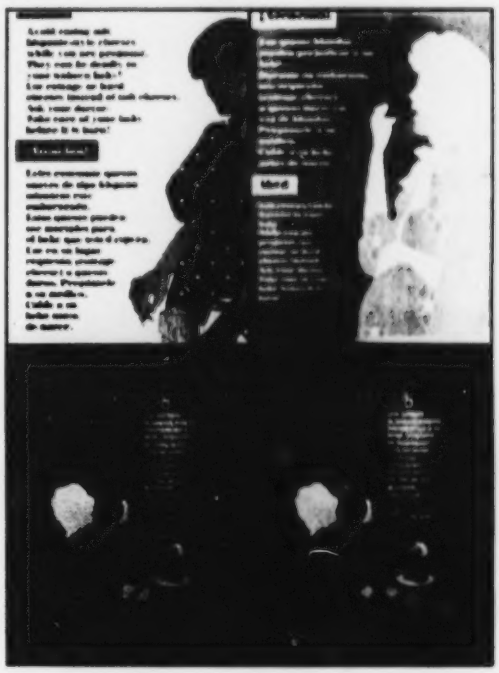
A literature search was conducted to identify research relating to visual communication and ethnic populations. Information retrieved focused primarily on developing health education materials for low-literate audiences (especially in the U.S.) and developing visual health education materials in developing countries.

Focus Group Tests

A series of focus group tests during development of a poster for Mexican-American women were performed by the FDA in 1992. Eight metropolitan areas across the U.S. and in Puerto Rico served as sites for approximately 200 respondents.

Initially, eight posters illustrating the following message were designed. Most of these designs, however, were eliminated prior to testing based on many of the principles identified in this paper. Four new variations were subsequently designed and tested (see figures 2.1 through 2.4). These posters varied in image content, colors, symbols, layout, etc. Differences in text, language, headings, and the display of English and/or Spanish text were tested as well.

Figure 2.1–2.4



Although materials for this project were not translated, but designed directly for the Hispanic population, the study is relevant to this paper in that over twelve variations were produced before identifying (the components of) one that was likely to be successful. This excercise in revisions highlights the need for cross-cultural design guidelines.

Materials Search

Over fifty organizations were contacted to request educational print materials (posters, brochures, pamphlets, flyers, booklets) on food

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safety and related subjects for ethnic populations in the U.S. and for consumers in developing countries. These were reviewed and compared for similarities and differences (FDA comparative study).

Findings and Guidelines

Symbols and Codes

Representations of images, concepts and actions are based on pictorial conventions. Fugelsang (1973) states that such conventions are abstract symbols and therefore, not necessarily intercultural. Interpretations are learned. If there is a difference between the codes of the creators of the signs (i.e., simplicity equals elegance) and the codes of the consumers of the signs (i.e., bright colors, gaudy, busy designs equals high class) there will be poor communication. (Berger, 1984, pp. 42-3)

Dichter (1964) differentiates between three types of symbols: *connotative symbols* are recognizable objects with both manifest and latent meanings, such as the depiction of a middle priced car in an upper class ad. *Interpretive symbols* invite interpretation.... and are concerned with deeper feelings (pp. 443-44). *Intentional symbols* are obvious symbols consciously and conventionally accepted by the population.

With the exception of color, which was too difficult to classify as one type of symbol, variables are discussed under one of these symbol classifications.

Color

Color is both an artistic attribute as well as a symbol with associated meanings. Preferences may be dependent on cultural and social backgrounds (Moynihan & Mukherjee, 1981; NDS, n.d.; Pett & Burbank, 1991; Rana, 1990; Zimmerman et al., 1989; Zimmerman & Perkin, 1982), and may be influenced by sex, culture, geography, and other demographic aspects of the target audience (Berryman, 1990). Affinity for certain color combinations was evident in FDA focus group tests: pastels were preferred to dark colors and bright colors, as in figures 2.3 and 2.4, were preferred to both dark or pastel colors.

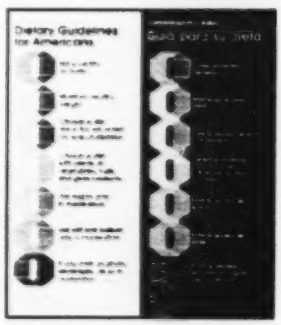
When unsure about what colors to use, it is best to use true to life colors (NDS, n.d.; Rana, 1990), especially when rendering skin color. For example, in India, black and yellow are the colors of a dead body (Moynihan & Mukherjee, 1981). One draft poster from the FDA study, used a skin tone which was too "gray". It was rejected in preliminary one-on-one research.

Intentional Symbols

Decorative

Guard against the use of random and noncommunicatve symbols, such as those which distract from rather than facilitate communication (Griffin, Pettersson, Semali and Takakuwa, 1995). The double-helix type design of the dietary guidelines in figures 3.1 and 3.2 is an example of a symbol which seems random.

Figures 3.1 and 3.2



Literal

Comprehension or preference for such symbols as crosses, arrows, checkmarks, skulls and cross bones, conversation balloons, etc. should be assessed (Rana, 1990; Zimmerman, et al., 1989; Zimmer & Zimmer, 1978). They are sometimes taken for granted as universally understood or typically used (NDS, n.d.). The skull and crossbones, taken from pirate tales

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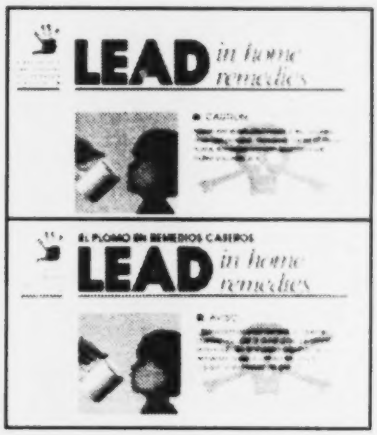
(Morgan & Welton, 1992) has failed in tests in other cultures. Still, we see them used liberally across cultures, as in the lead prevention materials in figures 4.1 and 4.2. In the FDA focus group tests, there was a slight preference for the "X" symbol, rather than the circle with a line through it, though both were understood.

Figures 4.1 and 4.2

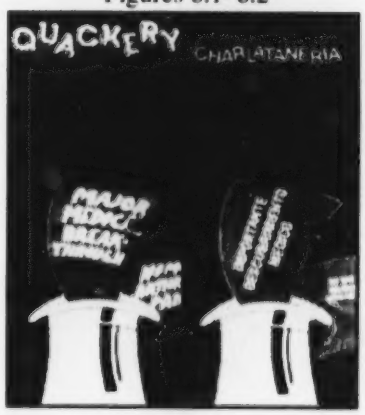


Text Within Visuals

English text incorporated within the visuals., as in the health fraud brochures in English, Spanish, Chinese, and Korean (see figures 5.1 through 5.4) will not only limit communication, but the English becomes an element of design which readers may view as unfamiliar and irrelevant.

Figures 5.1–5.4

Figures 6.1–6.2



Connotative Symbols

Concepts

The *Quackery* brochures in (figure 6.1 and 6.2) represent a conceptual image; a certain type of black hat upside down connotes to Americans that it is a magician's hat. Magic further implies trickery, which is, in the U.S., synonymous with quackery and fraud. The question is, does this concept translate across cultures?

Associative Meanings

In the series of brochures on lead poisoning prevention, figures 7.1 and 7.2 use an image of the facade of a house on the cover. However, this particular architectural style may not be familiar among an ethnic population. Also, the palladium window may be a symbol of an expensive house unlikely to be prevalent in neighborhoods of refugees and immigrants.

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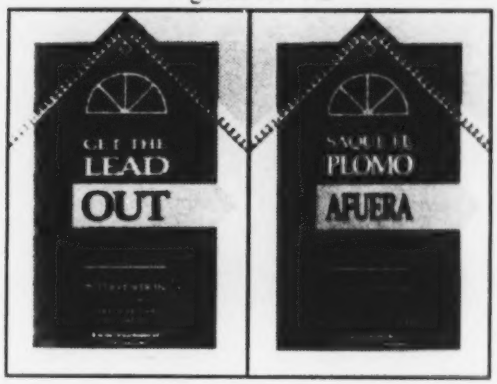
Figures 7.1–7.2



Typestyle

Type carries with it meaning in the style, layout and printing. Tomaselli and Tomaselli (1984) chose to use letraset letters instead of handwriting for their media graphics on breastfeeding in a developing country. They recognized that, to their audience, this gave the material a professional look, appealing to mothers.

Cultural Norms

Cultural norms, beliefs and customs should be reflected properly in the message and design (Rana, 1990; Rice & Valdivia, 1991). For example, in figure 8 from the FDA field tests, care is taken to show the pregnant woman's wedding ring. Within the Hispanic culture, family is very important, and the fact that the woman is married may be important to communicating a message about pregnancy.

Figure 8

Localizing materials means utilizing the local material culture within the image, and specifically, familiar items and objects (McBean, 1989; Pettersson, 1993; Zimmer & Zimmer, 1978; Zimmerman & Perkin, 1982; Zimmerman et al., 1989). Showing details that are not part of their culture, means they may not see the materials as having relevance to themselves (Moynihan & Mukherjee, 1981).

For example, the foods shown in the Spanish version of *Keep your food safe* (figure 9.1) should be changed to reflect more culturally appropriate foods, rather than retaining the same choices as the American version (figure 9.2).

Figures 9.1 and 9.2

One of the most conspicuous subject differences reflected by the FDA study comparing U.S. materials to those of developing countries involved variations in environmental settings. Materials from developing countries frequently incorporated outdoor settings with nature in the background, as in figure 10, from India. Plumbing may not exist, handwashing and latrine usage often take place outside, as does procurement and even preparation.

In comparison, U.S. materials were typically set in internal environments, kitchens and other parts of the interior (see figures 11 and 12 for Hispanic Americans) and were completely devoid of nature. These are examples of the types of visual issues based on lifestyle which become relevant when adpating and sharing materials.

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developing countries, consumers do not have an understanding of "safe" as it relates to food (FAO, 1993). When food control is not reliable, disease management may be a reality.

Such differences will influence and often even dictate which images and visual messages are appropriate and relevant, and can become important considerations when materials are adapted for other cultures.

Facial Recognition

It is important to depict people with whom the viewer can identify (Doak, 1985). In the materials in figures 13.1 through 13.4, it is logical that the same baby cannot look Vietnamese, Portuguese, Haitian, etc., at the same time. Respondents in the FDA focus group tests felt that the woman in figure 2.1 did not look "Hispanic". But it is not always easy to depict what we believe a person from the culture looks like. The dangers range from depicting people with whom our audience do not identify to stereotyping people.

Stereotypical Images

Avoid stereotypical images that do not relate to the content of the material. Do not use decorative images without researching their proper use and meaning, or inadvertently use the images and designs in a stereotypical way.

Interpretive Symbols

Visual Dialect

Visual elements create a feeling independent of meaning that resonates with the viewer. The socially or culturally influenced visual language (color, line, shape, value, etc.) is the "visual dialect". It reflects, describes, and expresses the social and cultural visual world of the audience, making a piece familiar and comfortable (Schiffman, 1995).

Style

Each culture has its own art and graphics (Zimmerman & Perkin, 1982). Adults in some parts of Asia best understand shaded

Figures 13.1–13.4

line drawings; silhouettes may be better in certain African communities; and photos may be more effective in countries where photonovelas are used, such as Mexico .

In the FDA comparison of materials, cartoons were not used in the U.S. but were used in some developing countries. There may be some avoidance by illustrators in the U.S. to use cartoons, as they are often perceived as children's art. However, this may not necessarily be so in every population. (Silbermann & Dyroff, 1986, p. 7) Still, appropriate style cartoons should be used at appropriate times. For example,photonovelas are often associated with soap opera-type media, and may be appropriate for issues involving love and sex, such as contraceptives or AIDS, but not for food.

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Figure 10

Figure 11

Alimentos Seguros
En El Restaurante
Cuando comas fuera, NO ordenes alimentos crudos o que no estén completamente cocidos.

Figure 12

Social Expressions, Body Language and Gesture

Gestures, facial expressions, posture, and personal space may vary across cultures (Morgan & Welton, 1992). They may not necessarily universal in the way they are interpreted and received (McBean, 1989; Zimmerman & Perkin, 1982; Zimmerman, et al., 1989). Body language, such as the way we stand, walk, and sit can be interpreted differently by different cultures (Zimmer & Zimmer, 1978).

Lifestyle

Images should represent everyday situations for the audience (Rice & Valdivia, 1991; Zimmerman, et al., 1989). For example, the image of the couple dressed for a candlelight dinner in a fine restaurant in figure 11 is unlikely to be a typical situation for a new refugee.

The need to show the correct people in the correct roles was observed in studies in Africa where the importance of the grandmother as a family figure was undermined by depicting her as giving incorrect advice (Tomaselli & Tomaselli, 1984). Zimmerman & Steckel (1985) found that the image of the back of a man sitting in a contraceptive clinic was distracting to women. This is identified as "extraneous" detail but is really "inappropriate" detail. In other words, would the back of a woman have been distracting?

In the FDA focus groups, respondents were asked whether they would prefer to see the pregnant woman with her husband or without. They chose to depict her alone. The women may have viewed pregnancy as a woman's issue.

Images must also be in line with what people believe and understand within their culture. In the FDA comparative review of materials, the entire conceptual approach to food safety differed. Developing countries primarily focused on "disease" — specifically, causes and prevention; U.S. materials focused on "safety" — how to keep food safe. Whereas one is about maintaining the quality of a product, the other is about avoiding the harmful impact of a product upon the individual. These disparate approaches may reflect principal needs of the regions and existing knowledges, beliefs and experiences. For example, in

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Realism and Abstraction

Abstractions are often culturally specific and inherently require a greater level of interpretation than realistic artwork. Stylizations and abstractions represent artificially determined depictions of objects or messages. However, in the FDA comparative study of materials, U.S. materials tended toward flat, stylized, abstract images.

Silhouetting

Silhouetting is a common technique among U.S. designers, where they are regarded as slick and simple. Yet they can be interpreted in complex ways. A UNICEF study among villagers in Nepal showed that silhouettes were thought to represent a black person, a monster, a devil or a ghost (NDS, n.d.). In the FDA field tests with Hispanic-Americans, shadow silhouettes, as in figure 2.2, were identified with the devil. They did not appreciate this being linked to pregnancy or to the baby. Respondents were also disturbed by "faceless" faces, as in figure 2.3, and by faces in profile that showed one eye, as in figure 2.4 as these were thought to imply that they had something to hide.

Context vs. Confusion

Depicting parts of images out of context, such as isolated parts of the body, should be used cautiously (Doak, et al., 1985; Moynihan & Mukherjee, 1981; Rana, 1990; Zimmerman et al., 1989). For example, series of brochures in figures 14.1 through 14.4 for English-speaking, Vietnamese, Korean, and Puerto Rican groups may not be a universally conventional way of depicting a baby in utero. Generally, it is best to retain detail which is not distracting (McBean, 1989; Pettersson, 1993; Rana, 1990; Zimmerman, et al., 1989), but puts the image in context (Moynihan & Mukherjee, 1981; Zimmerman & Perkin, 1982).

Visual Syntax

The relation of the picture's visual elements to each other is visual syntax (Zimmer & Zimmer, 1978). It can encompass scale, dimension, time, motion and change. Browsing through magazines for Hispanic

Figures 14.1–14.4

audiences, a cultural affinity for certain visual syntax is apparent. There is a busy-ness and boldness in Hispanic printed material, which Nely Galan recognizes and captures in her work (Garcia, 1995). Arrangement and organization can also be defined by symmetry or grids (Zimmer & Zimmer, 1978).

Sequence

Messages should be arranged in a sequence that is logical and preferred by the audience. Viewers may be used to reading in another language which follows a different direction, such as Arabic or Chinese (Doak et

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al., 1985). Where photonovelas are popular, sequencing conventions may already exist.

Perspective

Vanishing point perspective is a European-constructed convention (Fugelsang, 1973; Morgan & Welton, 1992; Rana, 1990; Zimmer & Zimmer, 1978). Asian art and classic Egyptian art are good examples of differences in representation of perspective. The use of such different pictorial conventions may not mean that only one is understood, but rather that one is more familiar and comfortable than another.

Scale

Objects depicted way out of scale, especially smaller to larger, such as insects or germs as in figure 15, can be misconstrued or confusing (Moynihan & Mukherjee, 1981).

Figure 15

Framing

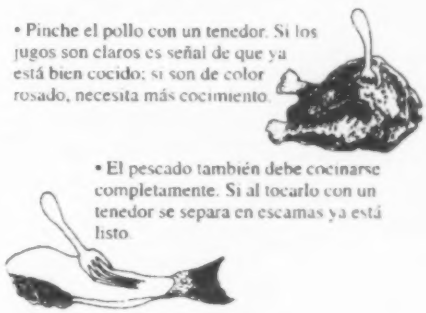
All pictures show three dimensions in two and crop the view at arbitrary borders (Zimmer & Zimmer, 1978). Images may be contained within frames on the page, may have no frame, or may bleed off the page.

In the FDA comparative review of materials, differences in framing were evident. Visual scope in developing countries tended to be more inclusive, illustrated within the context of part of a scene, or at least included the hands of a person, as in figure 16 from El Salvador.

U.S. materials more often contained isolated images of specific foods or actions, not set within a scenic context, showing foods independent of human interaction , as in figure 17. Again, this may reflect the fact that processing is primarily done in commercial plants, and the consumer's role in food handling is diminished.

Figure 16

Figure 17


• Pinche el pollo con un tenedor. Si los jugos son claros es señal de que ya está bien cocido; si son de color rosado, necesita más cocimiento.
• El pescado también debe cocinarse completamente. Si al tocarlo con un tenedor se separa en escamas ya está listo.

Layout of Text

When text is translated into other languages, word length changes (Spanish is longer) and layout and design must be adjusted to accommodate any additional clutter of text.

Conclusions

Visually translating health educational materials will be critical to the success of communication efforts, particularly as our population continues to change ethnically and less developed countries continue to develop. By understanding the types of issues which

become relevant when designing materials across cultures, we can avoid communication blunders and repeated field tests. We can more accurately evaluate the potential success of existing materials among different cultures and edit design elements based on reason, rather than personal taste.

This study leaves a number of areas open for future research. Comparative empirical tests of performance based on visually untranslated versus visually translated educational materials should be done. It would also be interesting to find out how visual culture changes and is adopted by ethnic populations. Do they retain certain aspects of visual culture more fervently than others? Which types of symbols are adopted first — intentional, connotative or interpretive? Are interpretive symbols as important as intentional symbols to the success of the communication effort? Finally, visual literacies are continually in transition, and exposure to and adoption of new media and media styles is inevitable. Absorption of the new culture is unlikely to be linear or predictable, but rather erratic and selective. How do people reinvent, as a group, new types of cultural expressions of the old world view within the new?

Visual translation needs will continue to become more important as our population continues to change. New populations will always carry greater demands for public service education. The more effective our communication efforts are, the greater our impact will be.

The views presented in this paper are solely the views of the author and do not necessarily represent those of FDA.

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